



DMSO INDUSTRY DAYS

LTC GARY JERAULD
PM COMANCHE CREW SUPPORT SYSTEMS



TOPICS

- **Highlight the Major Simulation Areas in Which the Comanche Program is Involved**
- **Discuss Comanche Modeling and Simulation Approach**



CURRENT COMANCHE PROGRAM

RDT&E

| FY 96 | FY97 | FY98 | FY99 | FY00 | FY01 | FY02 | FY03 | FY04 | FY05 | FY06 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| \$291 | \$331 | \$282 | \$371 | \$441 | \$587 | \$739 | \$784 | \$794 | \$364 | \$265 |

PROD

| | | |
|-------|--------|--------|
| \$160 | \$1214 | \$1350 |
|-------|--------|--------|

▲ MS II /LRIP
DAB

| QTY | (10) | (14) | (24) |
|-----|------|------|------|
|-----|------|------|------|

▲ LL
IPR

▲ LRIP
IPR

▲ MS III/IOC

Flight Qualification

First Flight
Jan 96

FLIGHT MEP

Sep 98

RECON MEP

Reconnais-
sance
MEP
Integration

ARMED RECON/
ATTACK MEP

Partial Armed
Reconnaissance &
Attack MEP
Integration



Field
Employment
FY02 - 03



Training

Warfighter
Evaluation

Full
Production
Capability



Training
& IOTE
FY05

IOC
DEC
06

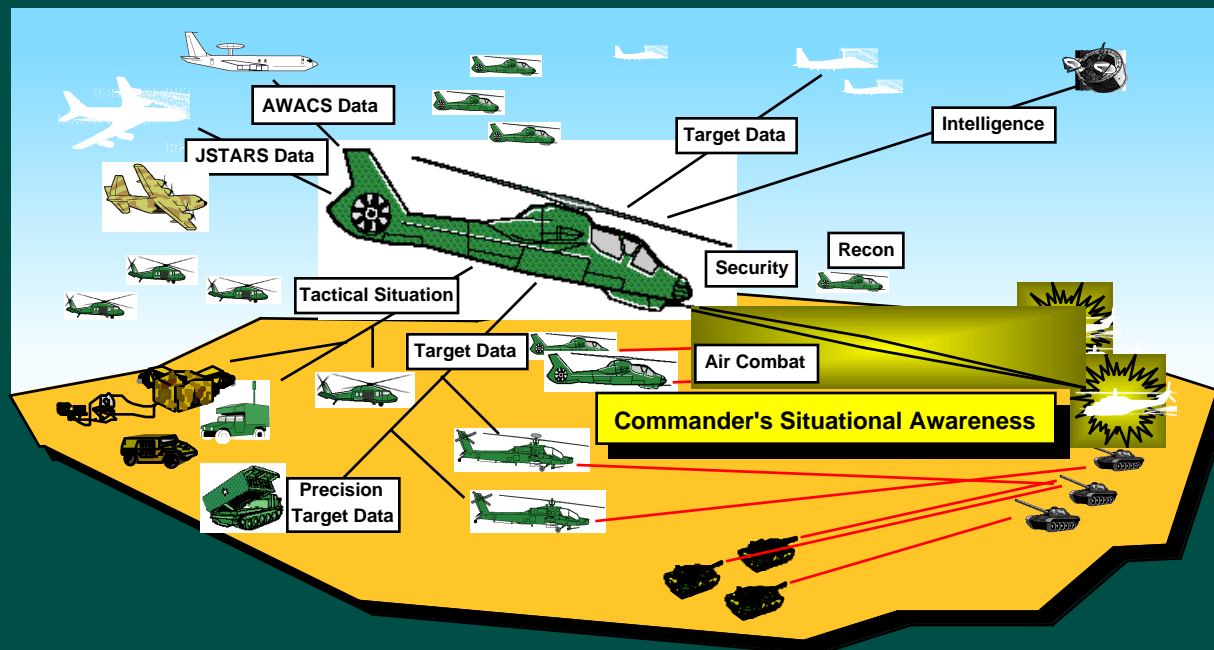
RAH-66 Comanche

DMSO Brief 5/22/97



COMANCHE MISSION/SYSTEM ATTRIBUTES

COVERS THE BATTLEFIELD



TECHNOLOGIES

- **LOW OBSERVABLES**

- RCS
- IR
- RF
- ACOUSTIC

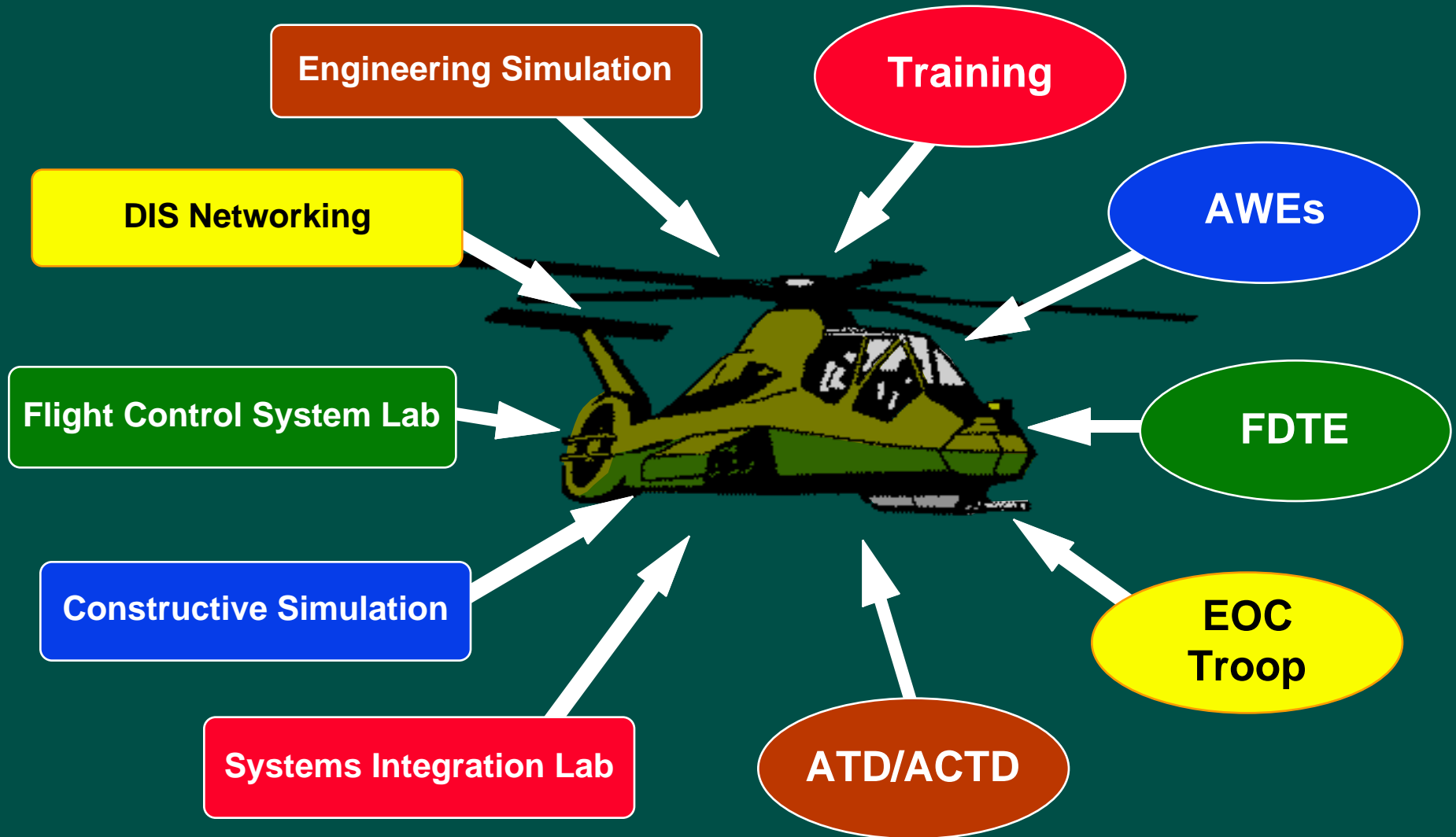


- **MEP**

- EOSS
- ICNIA
- 2ND GEN FLIR
- LONGBOW FCR
- SENSOR FUSION

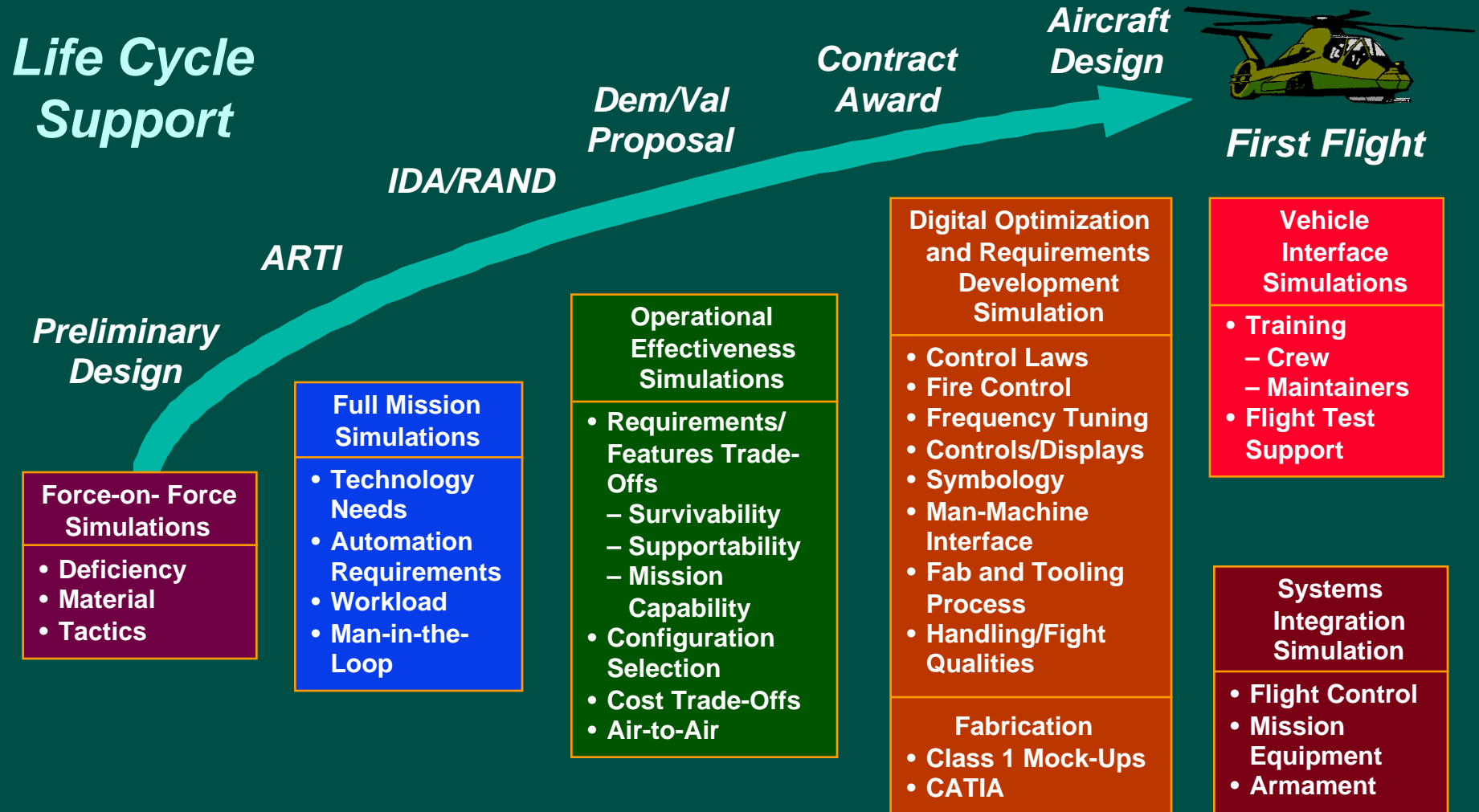


COMANCHE SIMULATION



SIMULATION INTERFACE WITH THE COMANCHE DESIGN PROCESS

| 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
|------|------|------|------|------|------|------|------|------|------|------|------|------|



COMANCHE SIMULATION



Engineering Development

- Crew Station
- Handling Qualities
- Survivability Testing
- Air Vehicle Design

Training Development

- Pilot
- Mechanic
- Crew
- Troop

Warfighting Development

- AWEs/ACTDs/ATDs
- Distributed Interactive Simulation
- Mission Planning and Rehearsal

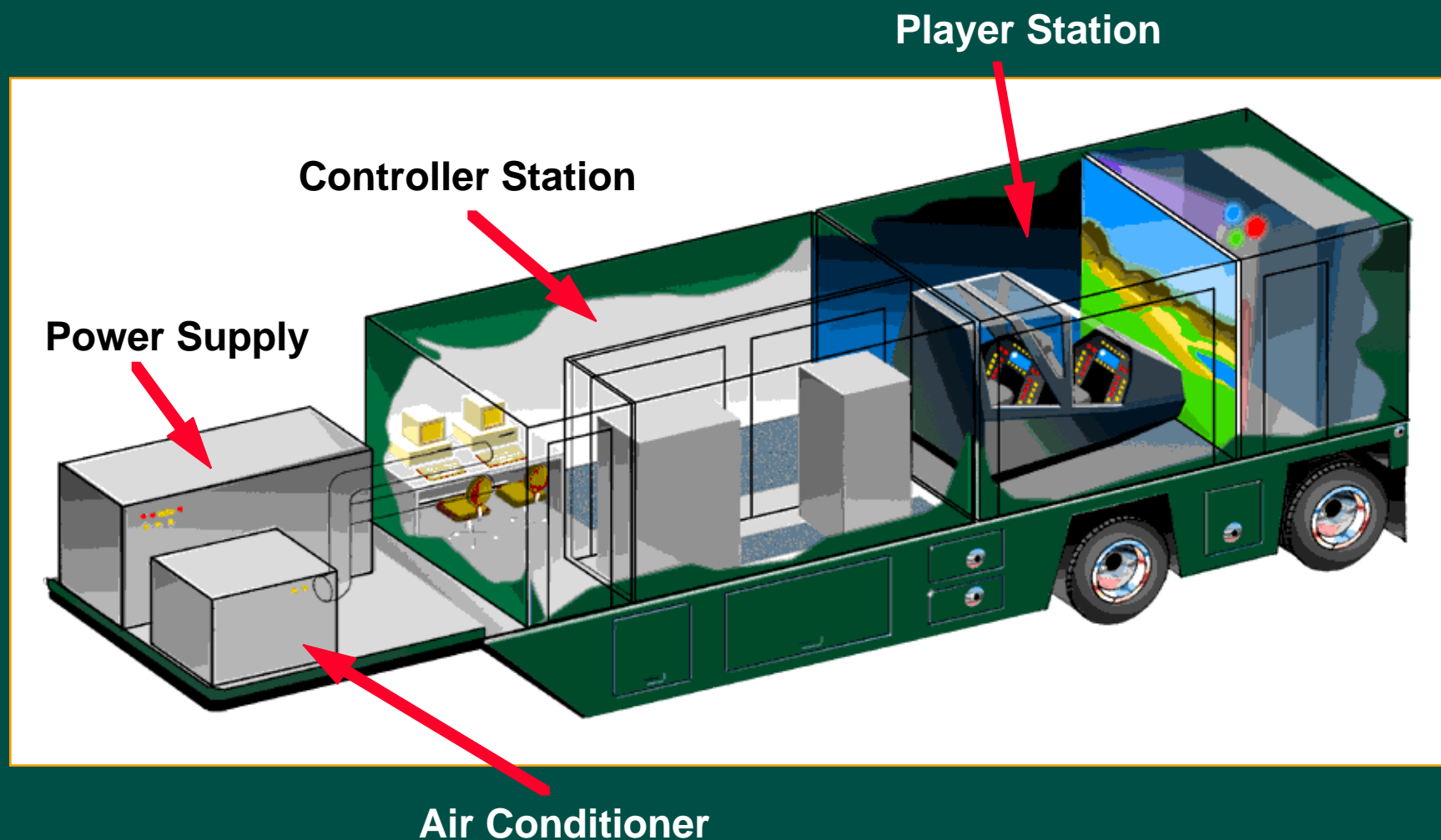


COMANCHE PORTABLE COCKPIT

- Cooperative Development Between PM and Sikorsky (GFE/CFE)
- Portable and Self Contained
- Purpose:
 - Display Comanche's Capabilities
 - Participate with Battle Labs (AWEs, ACTDs, ATDs)
 - FDTE II
- 11 Site Visits to Date
- DIS Compliant → HLA Compliance Planned
- Fully Operational For Night Operations



COMANCHE PORTABLE COCKPIT (CPC)



CPC



COMANCHE PLAYER STATION

- Located in the Aviation Test Bed at Ft. Rucker, AL
- Two-Seat Cockpit
- DIS Compliant → HLA Compliance Planned
- Linked with LPS & AWC → Future Links with A²C²s, AVCATT, AVTOC, ARMS
- Current Limitations:
 - Only Front Seat is Capable of Night Operations (Working Upgrade)
 - Upgrade is Required for Back Seat to Conduct Night Ops
 - Upgrade/Replacement of Helmets May Be Required in Mid-Term
 - Not a Portable Device





Comanche Player Station



FOR COMANCHE, A SOUND TADSS PROGRAM IS OF PARAMOUNT IMPORTANCE.

**Prove-Out/Demo System Capabilities
(Contributions to the Fight)**

**System
Optimization**

**Two (2)
Protoypes**

**Acquisition
Strategy → EOC**

**Severely
Constrained
Resources**

**New/Unproven
Technologies**

**Software
Intensive**

**Automated
Design/Tooling**



TEAM COMANCHE

Simulators/Simulations/Models (Future)

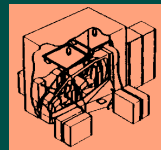
Operator

Individual



Crew/Team

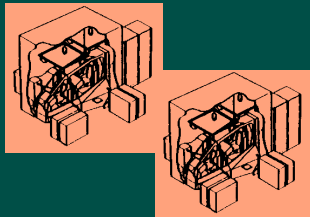
- Reconfigurable
- Non-Motion
- DIS/HLA Compliant



AVCAAT Module (Cockpit Simulation)

Bn/Sqdn

Collective

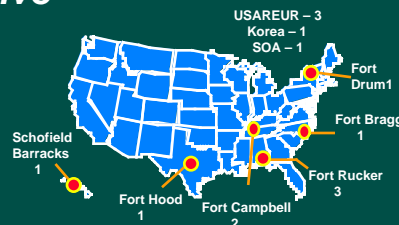


AVCAAT

- Reconfigurable
- Multiple Cocks
- DIS/HLA Compliant



- MILES/AGES
- JANUS/BBS
- CTC Instrumentation



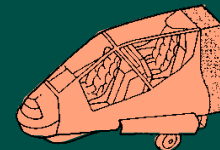
Maintainer

Installation

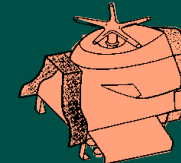


Remove and Replace Tasks

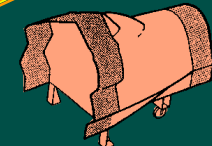
Ft. Eustis



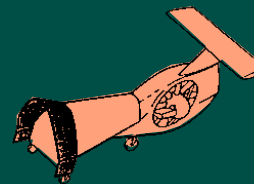
Module "A"
Cockpit/Sensors/
Turret/Gun



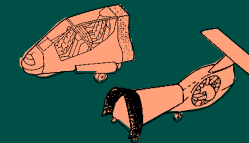
Module "B"
Rotor/Transmission/
Weapons



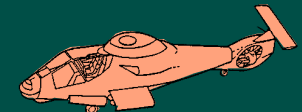
Module "C"
Engine Interface/Mission
Equipment Package



Module "D"
Fantail/Drivetrain



Module "E"
Landing Gear



Module "F"
Composite
Maintenance Trainer



COMANCHE M&S POC INFO

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